

ABSTRACT OF THE DISCLOSURE

The present invention includes phase shifters, interrogators, methods of shifting a phase angle of a signal, and methods of operating an interrogator. One aspect of the present invention provides a phase shifter including a first power divider configured to receive a signal and provide plural quadrature components of the signal; plural mixers coupled with the first power divider and configured to scale the quadrature components using a phase shift angle; and a second power divider coupled with the mixers and configured to combine the scaled quadrature components to shift the phase angle of the input signal by the phase shift angle.

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